A new species of Pygothrips Hood (Pygothripidae, Thysanoptera) from Zululand.

by

J. C. FAURE

Professor of Entomology, University of Pretoria.

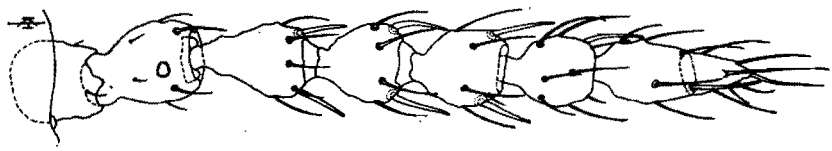
No representative of the genus *Pygothrips* Hood has apparently been recorded from South Africa, although *P. spinicauda* Priesner was described from the Belgian Congo (Rev. Zool. Bot. Afr.: 33, pp. 57—60, 1939). The new species described below was found on dry branches near the coast in Zululand.

Pygothrips amplus spec. nov. (Figs. 1—3).

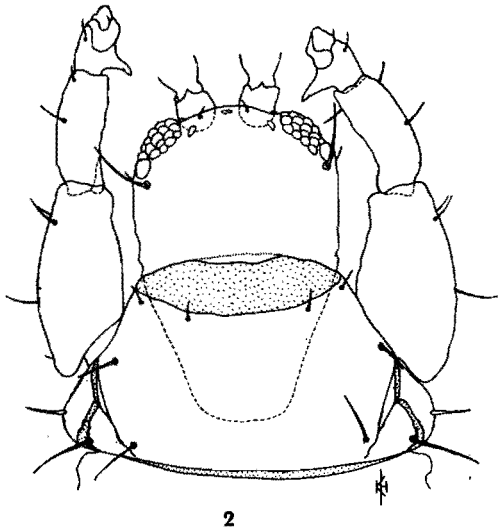
Female (apterous). Length 1.28 — 1.38 mm. Colour: General colour brown to black, with parts of legs and antennae yellow. Over black paper the intersegmentalia of the thorax and abdomen show bright red subhypodermal pigmentation, eyes also red. In transmitted light: head, thorax and i — v of abdomen light brown, thorax and abdomen shaded darker at sides owing to internal coloration; antennae: i yellow, ii paler, almost colourless, iii — vi very pale grey to brown, vii + viii slightly darker brown; abdomen: vi — ix brown to black, becoming darker caudad, tube black; legs about as brown as the head, except distal one-third to one-fourth of all femora, all tarsi, and anterior tibiae, which are largely yellow; major setae brown, those at tip of abdomen brown basally and yellow in distal part.

Head about 40 to 60μ wider than long, the cheeks parallel, the surface smooth except for two or three transverse lines of sculpture at base, vertex slightly raised, gently rounded. Eyes about 44 — 48 long dorsally, ventral length 28 — 36, dorsal width 36 — 40, dorsal interval 72 — 76μ; the facets on dorsal surface not contiguous (as erroneously shown on the drawing) but distinctly separated; two very large facets on outer posterior angles. Ocelli present, but small, distance between anterior and posterior 28 — 30, between posterior pair 52μ. Postoculars 52 — 60 long, pointed, standing about 129 — 135μ apart, very close to eyes. Frontal and postocellar setae minute.

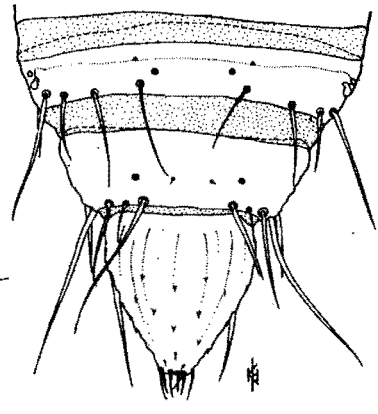
Antennae as illustrated, apparently seven segmented but with a distinct suture dividing vii on ventral side and a very faint indication of such a suture dorsally just distad of the sense-cone. Sense cones long and conspicuous, formula: iii, 1 — 1; iv, 1 — 1; v, 1 — 1 (+1); vi, 1 — 0 (+1); vii, 1 dorsal. Mouth-cone very broadly rounded,



1



2



3

Fig. 1. Right antenna, apterous female, paratype.
Fig. 2. Head and prothorax, apterous female, paratype.
Fig. 3. Segments viii, ix and x of abdomen, apterous female, paratype.
(Figs. 1—3 Miss K. Howitson del.: projection apparatus).

length from posterior dorsal margin of head 132 — 140μ; palpi large and conspicuous, both pairs with a spine-like appendage at tip about 8μ long; maxillary palpi: segment i about 11, segment ii about 28 long by 9 wide; labial: total length 22 — 26μ, width of segment ii about 8μ.

Prothorax as long as head or about 10μ longer, its length about 0.4 of its own width across coxae; surface of pronotum smooth except for a few transverse lines of sculpture on posterior margin; all usual setae present, pointed: anterior angulars 12 — 20, marginals 12 — 16, midlaterals 16 — 32, epimerals 40 — 68, posterior marginals 30 — 36, coxals 20 — 28μ long. Fore femora enlarged, as illustrated, tarsi with a well-developed tooth. Mesonotum practically flat, weakly transversely striate, irregularly spindle-shaped, being drawn out to rather sharp points laterally, width about 214, median length of sclerotized plate about 45μ, a pair of weak setae on hind margin about 8 — 11μ long. Metanotum subrectangular,

slightly raised medially, anterior two-thirds feebly reticulate, width 225 — 236, length 90 — 96μ, one pair of median setae about 28μ long.

Abdomen: tergites i, ii and ix weakly reticulate, tube with about 10 longitudinal ridges in basal two-thirds dorsally and about 6 ventrally, distal third of tube roughly reticulate, rest of abdomen practically unsculptured. Length of abdomen about 840 — 900, width about 320 — 330, length of tergite v about 56, width about 332μ. Tergite i exceedingly variable in the series of females before me; it consists of one, two or three parts of varying shapes and sizes and could not be of any value as a diagnostic character. Sternite ix is distinctly divided longitudinally throughout its length, the opening occupying about one-fifth of the width of the sternite. Tube in dorsal aspect suggesting that of the genotype, *P. rugicauda* Hood, but relatively wider at base and drawn to a narrower point at apex; width of tube at base about 10μ less than its length. In side view the tube is quite different from that of the genotype: the ventral margin is practically straight, the dorsal margin gently curved; greatest height, about one-third of length from base, about 76, height at about two-thirds from base about 55μ.

No sigmoid setae present. All setae pointed. Tergites ii to vii bear a pair of weak, short setae near median line and near middle of their length, plus four pairs on hind margin in left and right one-third; of these S.1 (counting from middle of tergite laterad) is weak on ii to vi, stronger on vii; S.2 is long and finely pointed throughout, its length increasing more or less regularly from about 80 on ii to about 129 — 163 on vii and its thickness also increasing on vi and vii; S.3 is much shorter and weaker than S.2; S.4 is weak on ii and iii, increasing rapidly from iv to vii on which it is about equal to S.2. Tergite viii with four pairs near hind margin, S.1 thin, about 84, S.2 thicker, finely pointed, about 73, S.3 stout, pointed, about 39 — 45, S.4 like S.2 about 90μ long. Sternite viii with three pairs like S.3 of tergite, situated near middle of sternite, about 56 — 62μ long. Tergite ix: S.1 stout basally, finely pointed, 141 — 180, S.2 very thin 22 — 34, S.3 spine-like, 67 — 84, S.4 stout in basal third, paler and very finely pointed distally, 141 — 169, S.5 again spine-like similar to S.3, 56 — 62μ long. Sternite ix bears two pairs of setae near its hind margin, the median pair about 34 long by 4μ wide, the outer pair about 124 by 6μ. Lateral setae borne on warts of tube about 6μ long, longest terminal tube setae about 40μ.

Measurements of holotype (apterous female) in μ: Length (distended) 1,280; head length 110, width across eyes 150, behind eyes 160; prothorax length 120, transcoxal width 300; fore-femur length 141, width 67, tibia length 84, width 34, tarsus length 51, width 28, tarsal tooth 23; hind-femur length 118, width 51, tibia 124 and 34, tarsus 56 and 23; abdomen length 840, width 320, tube length 130, width at base 120 at apex 30, terminal tube setae 40.

Antenna length 280

segment	i	ii	iii	iv	v	vi	vii+viii
length	32	36	40	34	36	32	60
width	32	30	28	28	28	28	24

Female (macropterous). Length (distended) 1.42 mm. Colour and structure identical with those of the apterous female, with the following exceptions:— ocelli larger, transverse diameter of posterior pair about 9 — 11 as compared with 4μ in the apterous form; distance between posterior pair 44μ. Wings gray in colour, surface somewhat roughened, fore-pair with a pale median longitudinal line in about middle third, this line extending nearly the whole length of the hind wings; length of fore wings 640 — 660μ, width at scale 60, at middle 70, near tip 60, fringe about 220μ long; no duplicated cilia. Only one sub-basal seta on fore-wing, pointed, 24 — 32μ long. As in apterous form, there are no sigmoid setae on abdomen.

Measurements of morphotype (macropterous female) in μ: Length (distended) 1,420; head length 120, width across eyes 150, behind eyes 160, postoculars 56, their interval 132; prothorax length 120, transcoxal width 300, setae: antero-angulars 16, antero-marginals about 4, midlaterals 24, epimerals 52 — 64, posterior marginals 28, coxals 32; fore-femur length 140, tibia length 100, tarsus length 40, its tooth 20; tube length 140, basal width 120, apical width 30, terminal setae 40.

Antenna length 290

segment	i	ii	iii	iv	v	vi	vii+viii
length	36	36	40	32	36	36	60
width	32	32	28	32	30	28	24

Male (apterous). Length (distended) 1.14 — 1.42 mm. This sex agrees closely in colour and general structure with the apterous female described above, with the following exceptions: The tube is less rounded at sides in basal third, the sides being more nearly straight and sub-parallel to about the middle, and then converging rapidly to apex. Setae on tergite viii:— S.1: 73 by 3, S.2: 56 by 6, S.3: 34 by 4, S.4: 79 by 6μ; three pairs on sternite viii about 39 to 51μ long. On tergite ix: S.1: 112 by 4, S.2: 34 by 1, S.3: 124 by 3, then S.4: a thin seta about 34μ long. Sternite ix bears four strong setae in a row at middle of central plate, the median pair about 56μ, the lateral ones somewhat weaker and shorter, and two slightly shorter near caudal margin of plate; at latero-caudal angles there are two additional pairs, the inner spine-like, about 39 by 6μ, the outer as thick at base but much longer, about 112μ long.

Measurements of allotype (oedymerous male macerated in NaOH) in μ: Length (distended) 1,420; head length 120, width at

eyes 140, behind eyes 150; postoculars 60, their interval 116; prothorax length 160, transcoxal width 340; setae: antero-angulars 16, antero-marginals 12, midlaterals 16 — 20, epimerals 64 — 72, posterior marginals 22 — 36, coxals 28 — 32; mesothorax width 300; fore-femur length 220, width 100, tibia length 100, width 40, tarsus length 40, width 30, tooth 20; abdomen width 300; tube length 120, width at base 110, at apex 30, terminal tube setae about 32.

Antenna length 280

segment	i	ii	iii	iv	v	vi	vii+viii
length	36	40	44	32	32	32	56
width	32	30	28	28	28	26	24

Described from 15 apterous females, one macropterous female and three apterous males collected by the writer and Mr. W. G. Powell in beating dead branches of indigenous trees and bush in Zululand, January to June, 1943 to 1949, at Sordwana, St. Lucia Lake, Dukuduku and Richards Bay.

This new species differs strikingly from *P. metulicauda* Karny, *needhami* Hood, *nogutii* Kurosawa and *spinicauda* Priesner in having only two sense cones on segment iv of the antennae, instead of four. Unfortunately there appears to be no record in the literature of the sense-cone formulae of the seven other species described in the genus, including the genotype. *P. amplus* spec. nov. differs from these species as follows:— *albiceps, breviceps, fortis* and *zeteki* Hood in the shorter third to fifth antennal segments; *rugicauda* Hood in the shape of the tube in lateral aspect and the shorter antennal segments; *conifer* Hood in having the tube about 1.08 as long as wide instead of 1.4 times as long; and *nigricauda* Hood in lacking duplicated cilia on the fore-wing.